OIPE

RAW SEQUENCE LISTING DATE: 03/15/2001 PATENT APPLICATION: US/09/733,507 TIME: 17:22:12

```
3 <110> APPLICANT: Agriculture and Agri-Food Canada; The University of Saskatchewan
      5 <120> TITLE OF INVENTION: Cyclin Dependant Kinase Inhibitors as Plant Growth
              Regulators ·
      8 <130> FILE REFERENCE: 81601-3
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/733,507
C--> 11 <141> CURRENT FILING DATE: 2001-03-15
     13 <150> PRIOR APPLICATION NUMBER: CA 2,256,121
     14 <151> PRIOR FILING DATE: 1998-12-31
                                                                     ENTERED
     16 <160> NUMBER OF SEQ ID NOS: 16
     18 <170> SOFTWARE: PatentIn Ver. 2.0
     20 <210> SEQ ID NO: 1
     21 <211> LENGTH: 904
     22 <212> TYPE: DNA
     23 <213> ORGANISM: Arabidopsis thaliana
     25 <220> FEATURE:
     26 <221> NAME/KEY: CDS
     27 <222> LOCATION: (55)..(627)
     29 <220> FEATURE:
     30 <221> NAME/KEY: intron
     31 <222> LOCATION: (252)..(253)
     33 <220> FEATURE:
     34 <221> NAME/KEY: intron
     35 <222> LOCATION: (296)..(297)
     37 <220> FEATURE:
     38 <221> NAME/KEY: intron
     39 <222> LOCATION: (563)..(564)
     41 <400> SEQUENCE: 1
     42 atotototot otoacagaga tigtaactic acgcacacgt aacotaaatc gaag atg
                                                                     Met
     43
                                                                       1
     44
     46 gtg aga aaa tat aga aaa gct aaa gga att gta gaa gct gga gtt tcg
                                                                           105
     47 Val Arg Lys Tyr Arg Lys Ala Lys Gly Ile Val Glu Ala Gly Val Ser
                                         10
     50 tca acg tat atg cag cta cgg agc cgg aga att gtt tat gtt aga tcg
                                                                           153
     51 Ser Thr Tyr Met Gln Leu Arg Ser Arg Arg Ile Val Tyr Val Arg Ser
                                                          30
                 20
                                     25
     54 gaa aaa toa ago tot gto too gto gto ggt gat aat gga gtt tog tog
                                                                           201
     55 Glu Lys Ser Ser Ser Val Ser Val Val Gly Asp Asn Gly Val Ser Ser
                                 40
             35
                                                                           249
     58 tct tgt agt gga agc aat gaa tat aag aag aaa gaa tta ata cat ctg
     59 Ser Cys Ser Gly Ser Asn Glu Tyr Lys Lys Lys Glu Leu Ile His Leu
                                                  60
     60 50
                             55
     62 gag gag gaa gat aaa gat ggt gac act gaa acg tcg acg tat cga cgg
                                                                           297
     63 Glu Glu Glu Asp Lys Asp Gly Asp Thr Glu Thr Ser Thr Tyr Arg Arg
                                             75
                                                                           345
     66 gtg acg aag agg aag ctt ttt gaa aat ctg aga gag gag gag aaa gaa
     67 Val Thr Lys Arg Lys Leu Phe Glu Asn Leu Arg Glu Glu Glu Lys Glu
```

RAW SEQUENCE LISTING DATE: 03/15/2001 PATENT APPLICATION: US/09/733,507 TIME: 17:22:12

```
90
                                                                    393
70 gaa tta agt aaa tcc atg gag aat tat tca tcg gaa ttt gaa tcg gcg
71 Glu Leu Ser Lys Ser Met Glu Asn Tyr Ser Ser Glu Phe Glu Ser Ala
         100
                          105
                                                 110
74 gtt aaa gaa tog tta gat tgt tgt tgt agc ggg agg aaa acg atg gag
                                                                    441
75 Val Lys Glu Ser Leu Asp Cys Cys Cys Ser Gly Arg Lys Thr Met Glu
                          120
                                              125
78 gag acg gtg acg gcg gag gag gag aag gcg aaa ttg atg acg gag
                                                                    489
79 Glu Thr Val Thr Ala Glu Glu Glu Glu Lys Ala Lys Leu Met Thr Glu
80 130
                                         140
                     135
82 atg cca acg gaa tcg gaa att gaa gat ttt ttt gtg gaa gct gag aaa
                                                                    537
83 Met Pro Thr Glu Ser Glu Ile Glu Asp Phe Phe Val Glu Ala Glu Lys
                 150
                                     155
                                                                    585
86 caa ctc aaa gaa aaa ttc aag aag tac aat ttc gat ttc gag aag
87 Gln Leu Lys Glu Lys Phe Lys Lys Lys Tyr Asn Phe Asp Phe Glu Lys
       165
                                  170
90 gag aag cca tta gaa gga cgt tac gaa tgg gta aag tta gag
                                                                    627
91 Glu Lys Pro Leu Glu Gly Arg Tyr Glu Trp Val Lys Leu Glu
                              185
94 tgaagaagaa gaagaagttt atggtttttt ttttaacttt ttagatttta atatttcagg 687
96 gaataagtta attitattit gitgattigg aaatataaga titgtaggag gaatgittit 747
98 agaagtacga aattgcacag aaaaagaaga aagcttttta acagatttta gagcccagaa 807
100 aagtogtgto tittagotot actittacot ottottogaa tottgtgtat ottitagoat 867
102 attctttagt acatttttat gtttttggtg actgata
105 <210> SEQ ID NO: 2
106 <211> LENGTH: 191
107 <212> TYPE: PRT
108 <213> ORGANISM: Arabidopsis thaliana
110 <400> SEQUENCE: 2
111 Met Val Arg Lys Tyr Arg Lys Ala Lys Gly Ile Val Glu Ala Gly Val
114 Ser Ser Thr Tyr Met Gln Leu Arg Ser Arg Arg Ile Val Tyr Val Arg
115
                                   25
               20 .
117 Ser Glu Lys Ser Ser Ser Val Ser Val Gly Asp Asn Gly Val Ser
118 35
                               40
120 Ser Ser Cys Ser Gly Ser Asn Glu Tyr Lys Lys Lys Glu Leu Ile His
                           55.
                                               60
123 Leu Glu Glu Glu Asp Lys Asp Gly Asp Thr Glu Thr Ser Thr Tyr Arg
                       70
                                           75
126 Arg Val Thr Lys Arg Lys Leu Phe Glu Asn Leu Arg Glu Glu Glu Lys
                                        90
129 Glu Glu Leu Ser Lys Ser Met Glu Asn Tyr Ser Ser Glu Phe Glu Ser
              100
                                   105
                                                      110
132 Ala Val Lys Glu Ser Leu Asp Cys Cys Ser Gly Arg Lys Thr Met
                               120
         115
135 Glu Glu Thr Val Thr Ala Glu Glu Glu Lys Ala Lys Leu Met Thr
                           135
138 Glu Met Pro Thr Glu Ser Glu Ile Glu Asp Phe Phe Val Glu Ala Glu
139 145
                       150
                                           155
```

RAW SEQUENCE LISTING DATE: 03/15/2001 PATENT APPLICATION: US/09/733,507 TIME: 17:22:12

Input Set : A:\81601-3.pct.seqlist.txt
Output Set: N:\CRF3\03152001\I733507.raw

141 Lys Gln Leu Lys Glu Lys Phe Lys Lys Lys Tyr Asn Phe Asp Phe Glu 165 170 144 Lys Glu Lys Pro Leu Glu Gly Arg Tyr Glu Trp Val Lys Leu Glu 145 180 185 148 <210> SEQ ID NO: 3 149 <211> LENGTH: 660 150 <212> TYPE: DNA 151 <213> ORGANISM: Arabidopsis thaliana 153 <400> SEQUENCE: 3 154 acgtatatgc agctacggag ccggagaatt gtttatgtta gatcggaaaa atcaagctct 60 156 gtctccgtcg tcggtgataa tggagtttcg tcgtcttgta gtggaagcaa tgaatataag 120 158 aagaaagaat taatacatct ggaggaggaa gataaagatg gtgacactga aacgtcgacg 180 160 tatcgacggg gtacgaagag gaagcttttt gaaaatctga gagaggagga gaaagaagaa 240 162 ttaagtaaat ccatggagaa ttattcatcg gaatttgaat cggcggttaa agaatcgtta 300 164 gattgttgtt gtagcgggag gaaaacgatg gaggagacgg tgacggcgga ggaggaggag 360 166 aaggcgaaat tgatgacgga gatgccaacg gaatcggaaa ttgaagattt ttttgtggaa 420 168 gctgagaaac aactcaaaga aaaattcaag aagaagtaca atttcgattt cgagaaggag 480 170 aagccattag aaggacgtta cgaatgggta aagttagagt gaagaagaag aagaagttta 540 172 tggtttttt tttaactttt tagattttaa tatttcaggg aataagttaa ttttattttg 600 174 ttgatttgga aatataagat ttgtaggagg aatgttttta gaagtacgaa attgcacaga 660 177 <210> SEQ ID NO: 4 178 <211> LENGTH: 443 179 <212> TYPE: DNA 180 <213> ORGANISM: Arabidopsis thaliana 182 <400> SEQUENCE: 4 183 acgtatatgc agctacggag ccggagaatt gtttatgtta gatcggaaaa atcaagctct 60 185 gtctccgtcg tcggtgataa tggagaatta ttcatcggaa tttgaatcgg cggttaaaga 120 187 atcgttagat tgttgttgta gcgggaggaa aacgatggag gagacggtga cggcggagga 180 189 ggaggagaag gcgaaattga tgacggagat gccaacggaa tcggaaattg aagatttttt 240 191 tgtggaaget gagaaacaac tcaaagaaaa attcaagaag aagtacaatt tcgatttcga 300 193 gaaggagaag ccattagaag gacgttacga atgggtaaag ttagagtgaa gaagaagaag 360 195 aagtttatgg ttttttttt aactttttag attttaatat ttcagggaat aagttaattt 420 197 tattttgttg atttggaaat ata 200 <210> SEQ ID NO: 5 201 <211> LENGTH: 377 202 <212> TYPE: DNA 203 <213> ORGANISM: Arabidopsis thaliana 205 <400> SEQUENCE: 5 206 gagttatttt aggggtacga agaggaagct ttttgaaaat ctgagagagg aggagaaaqa 60 208 agaattaagt aaatccatgg agaattattc atcggaattt gaatcggcgg ttaaagaatc 120 210 gttagattgt tgttgtagcg ggaggaaaac gatggaggag gaggaggaga aggcgaaatt 180 212 gatgacggag atgccaacgg aatcggaaat tgaagatttt tttgtggaag ctgagaaaca 240 214 actcaaagaa aaattcaaga agaagtacaa tttcgatttc gagaaggaga agccattaga 300 216 aggacgttac gaatgggtaa agttagagtg aagaagaaga agaagtttat ggttttttt 360 218 ttaacttttt agatttt 221 <210> SEQ ID NO: 6 222 <211> LENGTH: 755 223 <212> TYPE: DNA 224 <213> ORGANISM: Arabidopsis thaliana

RAW SEQUENCE LISTING DATE: 03/15/2001 PATENT APPLICATION: US/09/733,507 TIME: 17:22:12

```
226 <400> SEOUENCE: 6
227 gtggaatcta ggataattct gtctccgtgt gtacaggcga cgaatcgcgg tggaattgtg 60
229 gcgagaaatt cagcaggagc gtcggagacg agtgttgtta tagtacgacg gcgagattct 120
231 cctccggttg aagaacagtg tcaaatcgaa gaagaagatt cgtcggtttc gtgttgttct 180
233 acatcggaag agaaatcgaa acggagaatc gaatttgtag atcttgagga aaataacggt 240
235 gacgatcgtg aaacagaaac gtcgtggatt tacgatgatt tgaataagag tgaggaatcg 300
237 atgaacatgg attettette ggtggetgtt gaagatgtag agtetegeeg eaggttaagg 360
239 aagagtetee atgagaeggt gaaggaaget gagttagaag aettttttea ggtggeggag 420
241 aaagatette ggaataagtt gttggaatgt tetatgaagt ataaettega tttegagaaa 480
243 gatgagccac ttggtggagg aagatacgag tgggttaaat tgaatccatg aagaagacga 540
245 tgatgataat gatgatcatt gttttcacca aagtacttat tatttctctt ctgtaataat 600
247 ctttgctttg atttttcttt taacaaaatc caaatgtaga tatctttctc tcgaataatc 660
249 aataacatgt aattcaactt ttgtttgtac ttccttgagg taattaatta gattcgtgtt 720
251 tttctcgatt aataaactat aagtttataa ctaaa
254 <210> SEO ID NO: 7
255 <211> LENGTH: 824
256 <212> TYPE: DNA
257 <213> ORGANISM: Arabidopsis thaliana
259 <400> SEQUENCE: 7
260 aaaaaaaagc agagagagag agcacacaaa aatccaagag agaaaaaaaat qagcqagaga 60
262 aagegagage ttgcagaaga agettcaage acaagettet caccactgaa gaaaacgaag 120
264 cttaatgatt ettetgatte ateaeeggae teteatgaeg teategtett egeggtttea 180
266 tettetteeg tigetiegte ggeggetita gegietgaig aaigtieegt taccateggi 240
268 ggagaagaaa gtgatcagtc ctcgagtatc agctccggtt gtttcaccag tgaatcgaaa 300
270 gaaatcgcga agaacagttc gtcgtttggt gtagatctgg aggatcatca aatcgaaacc 360
272 gaaaccqaaa cctcaacatt catcaccaqc aatttcaqaa aaqaqacqaq tccaqtqaqt 420
274 gagggtttgg gagaaacgac aacagaaatg gaatcatcat cggcaacgaa gagaaaacaa 480
276 ccgggggtga ggaagactcc aacggcggcg gagattgagg atttgttctc ggagctagag 540
278 agtcaagacg ataagaagaa gcaattcata gaaaagtaca acttcgatat tgtcaatgac 600
280 gaaccgcttg aaggtcgcta caagtgggat cgactttaag ccatcaaaaa gcaaatacca 660
282 tecatgaaga agacaaaaga aaaataggtt ttgttttteg tggttaacat ttecaettgt 720
284 acagetetag tetatttete tttaaaaaee tatgttaeta gttegtaeaa aacaaaacaa 780
286 aaaacacgac ctttataatg aaatttcgga tcttggctac taaa
289 <210> SEQ ID NO: 8
290 <211> LENGTH: 642
291 <212> TYPE: DNA
292 <213> ORGANISM: Arabidopsis thaliana
294 <400> SEQUENCE: 8
295 etetetecag agaaaactat aatgagettg agagaaatga gegaaacaaa acceaagaga 60
297 gattctgagt acgaaggatc aaacatcaag aggatgagac tcgatgatga tgatgacgtt 120
299 ttacgctcac cgacgagaac tetttettet tetteetett ettetetgge ttacteggtt 180
301 teagatteeg gaggtttetg eteegtegeg ttatetgaag aagaagaega teatetaage 240
303 tcaagcatca getetggttg ttecagcage gaaactaaeg aaategetae tegtetteea 300
305 titteagate tggaggetea tgaaatetee gaaacegaaa teteaaegtt acteaceaae 360
307 aatttcagga aacagggaat ttcatcaagc gagaatctgg gagaaacagc agaaatggac 420
309 teggegaega eggagatgag agateagaga aagaeggaga agaagaagaa gatggaaaaa 480
311 tcaccgacge aggeagaget tgatgacttt ttctcggcgg cggagagata cgaacagaaa 540
313 cgattcacag aaaagtacaa ctacgacatc gtcaatgata cgccgcttga aggtcggtac 600
315 cagtgggtta gtctgaaacc ttagaagcca tggaagaaca aa
```

RAW SEQUENCE LISTING DATE: 03/15/2001'
PATENT APPLICATION: US/09/733,507 TIME: 17:22:12

```
318 <210> SEQ ID NO: 9
319 <211> LENGTH: 533
320 <212> TYPE: DNA
321 <213> ORGANISM: Arabidopsis thaliana
323 <400> SEQUENCE: 9
324 attaaagagt ctggttccag gtctcgcgtt gactcggtta actcggctcc tgtagctcag 60
326 agetetaatg aagatgaatg tittgacaat tiegtgagtg teeaagtite tigtggtgaa 120
328 aacagteteg gttttgaate aagacacage acaagggaga geaegeettg taactttgtt 180
330 gaggatatgg agatcatggt tacaccaggg tctagcacga ggtcgatgtg cagagcaacc 240
332 aaagagtaca caagggaaca agataacgtg atcccgacca ctagtgaaat ggaggagttc 300
334 tttgcatatg cagagcagca gcaacagagg ctattcatgg agaagtacaa cttcgacatt 360
336 gtgaatgata tececeteag eggaegttae gaatgggtge aagteaaace atgaagttea 420
338 aaaggaaaca gctccaaaag acatggtgtg aagttagaga attgtgatgg agtttaacag 480
340 aactaaccaa acatcagaaa tcgtgttaat ccttaagtta ataatgtggg tta
343 <210> SEQ ID NO: 10
344 <211> LENGTH: 191
345 <212> TYPE: PRT
346 <213> ORGANISM: Arabidopsis thaliana
348 <400> SEQUENCE: 10
349 Met Val Arg Lys Tyr Arg Lys Ala Lys Gly Ile Val Glu Ala Gly Val
                                         10
352 Ser Ser Thr Tyr Met Gln Leu Arg Ser Arg Arg Ile Val Tyr Val Arg
                                                         30
                                     25
353
                20
355 Ser Glu Lys Ser Ser Ser Val Ser Val Val Gly Asp Asn Gly Val Ser
                                 40
356
            35
358 Ser Ser Cys Ser Gly Ser Asn Glu Tyr Lys Lys Glu Leu Ile His
                             55
359
         50
361 Leu Glu Glu Glu Asp Lys Asp Gly Asp Thr Glu Thr Ser Thr Tyr Arg
                                             75
364 Arg Gly Thr Lys Arg Lys Leu Cys Glu Asn Leu Arg Glu Glu Glu Lys
                     85
                                         90
367 Glu Glu Leu Ser Lys Ser Met Glu Asn Tyr Ser Ser Glu Phe Glu Ser
                                    105
                100
370 Ala Val Lys Glu Ser Leu Asp Cys Cys Cys Ser Gly Arg Lys Thr Met
                                120
                                                     125
            115
373 Glu Glu Thr Val Thr Ala Glu Glu Glu Glu Lys Ala Lys Leu Met Thr
                                                140
                            135
376 Glu Met Pro Thr Glu Ser Glu Ile Glu Asp Phe Phe Val Glu Ala Glu
                       150
                                            155
377 145
379 Lys Gln Leu Lys Glu Lys Phe Lys Lys Lys Tyr Asn Phe Asp Phe Glu
                                       170
                                                            175
                    165
382 Lys Glu Lys Pro Leu Glu Gly Arg Tyr Glu Trp Val Lys Leu Glu
                                    185
                180
386 <210> SEQ ID NO: 11
387 <211> LENGTH: 176
388 <212> TYPE: PRT
389 <213> ORGANISM: Arabidopsis thaliana
391 <400> SEQUENCE: 11
392 Val Glu Ser Arg Ile Ile Leu Ser Pro Cys Val Gln Ala Thr Asn Arg
```

VERIFICATION SUMMARYDATE: 03/15/2001PATENT APPLICATION: US/09/733,507TIME: 17:22:13

Input Set : A:\81601-3.pct.seqlist.txt
Output Set: N:\CRF3\03152001\I733507.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date

STATISTICS SUMMARY

PATENT APPLICATION: US/09/733,507

DATE: 03/15/2001 TIME: 17:22:13

Input Set : A:\81601-3.pct.seqlist.txt
Output Set: N:\CRF3\03152001\I733507.raw

Application Serial Number: US/09/733,507

Alpha or Numeric: Numeric

Application Class:

Application File Date: 03-15-2001

Art Unit: OIPE

Software Application: PatentIn Total Number of Sequences: 16

Total Nucleotides: 5942
Total Amino Acids: 1311
Number of Errors: 0
Number of Warnings: 0
Number of Corrections: 2

MESSAGE SUMMARY

270 C: 1 (Current Application Number differs)

271 C: 1 (Current Filing Date differs).